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**Via Electronic Mail:** [appliances@energystar.gov](mailto:appliances@energystar.gov)

Amanda Stevens  
U.S. Environmental Protection Agency  
ENERGY STAR Appliance Program  
Washington, DC 20460

**Re: Request for Comment on Draft 3 Version 5.0 ENERGY STAR Specification  
for Residential Refrigerators and Freezers**

Dear Ms. Stevens:

Electrolux Home Products (“Electrolux” or “Company”) is pleased to submit these comments on the U.S. Environmental Protection Agency’s (“EPA” or “Agency”) ENERGY STAR Specification for Residential Refrigerators and Freezers, Eligibility Criteria, Draft 3 Version 5.0 (“Draft Specification”). Electrolux is a major supplier of freezers in the United States and thus has robust technical and engineering expertise and manufacturing know-how when it comes to making energy-efficient freezers. We are writing to urge EPA to retain an ENERGY STAR category for freezers after 2014.

Under the Draft Specification, the Agency is proposing to sunset full-size and compact freezers after considering the Department of Energy’s (“DOE”) minimum baseline standards for 2014. Specifically, the 2014 standards require full-size freezers to use at least 25-30% less energy than the current energy conservation standards.<sup>1</sup> Given these new requirements, one manufacturer recommended sunsetting freezers from the ENERGY STAR program.

The Agency indicated that it is uncertain whether there will be cost-effective products that exceed the 2014 baseline standards. EPA is welcoming comment on whether cost-effective opportunities will be available to differentiate the energy efficiency of freezers for consumers for 2014.

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<sup>1</sup> *Energy Conservation Program: Energy Conservation Standards for Residential Refrigerators, Refrigerator-Freezers, and Freezers*, 76 Fed. Reg. 57,516, 57,574 (September 15, 2011).

Electrolux is confident, based on our current research and development, that achieving ENERGY STAR status will be possible for freezers and cost-effective for consumers, and have every expectation that we will be able to offer to the public ENERGY STAR options in virtually all freezer categories.

Electrolux does not agree with sunseting full-size and compact freezers from the ENERGY STAR program. The Company has long had the understanding that there would continue to be an ENERGY STAR program. Early on, it began planning for a line of ENERGY STAR freezers for 2014. Electrolux has invested heavily in its research and development process to modify existing units to meet the 2014 ENERGY STAR standards. The bulk of these products will be manufactured in the U.S. Over 2,000 company employees in the U.S. are currently involved in the production and sale of freezers. In addition, Electrolux exports approximately 10% of its freezers internationally. Consumers value the availability of the ENERGY STAR program and the availability of more energy efficient freezers.

Our portfolio of freezers includes product categories such as upright freezers, chest freezers, and compact freezers. Currently, we sell four different upright freezers ranging in volume from approximately 12 to 21 cubic feet; five different chest freezers from approximately 9 to 25 cubic feet; and two different compact freezers from approximately 5 to 7 cubic feet. The Company's goal is to be able to offer ENERGY STAR compliant models in 2014 within each freezer product category.

#### Cost Effective Product Analysis

Navigant Consulting, Inc.'s *Preliminary Technical Support Document: Energy Efficient Program for Consumer Products* calculates the estimated life-cycle cost and payback period of freezers at the consumer level.<sup>2</sup> The report analyzes the discounted savings in operating costs throughout the estimated average life of the product, compared to any increase in the product's installed cost likely to result directly from the imposition of a given standard. The Navigant Report indicates that for upright freezers the average payback period is approximately 1.5 years for an efficiency level that is 25% less than baseline energy use; the average payback period for chest freezers is approximately 2.8 years for an efficiency level that is 25% less than baseline energy use; and the average payback period for compact freezers is approximately 6.7 years for an efficiency level that is 25% less than baseline energy use.<sup>3</sup> Factors involved in calculating the LCC include the installed cost to the consumer (purchase price plus installation cost), operating costs (energy expenses), the lifetime of the appliance, and a discount rate.

The ENERGY STAR program criteria assumes that consumers may have to pay more for compliant products, but will recoup this investment in the form of energy savings over time. Thus, the payback period used by EPA to estimate the period in which consumers will recoup their investment in a product should be viewed in relation to the anticipated lifespan of the product itself. Electrolux believes that the average expected lifetime of a freezer is at least 15

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<sup>2</sup> Docket Document No. EERE-2008-BT-STD-0012-0022, *Preliminary Technical Support Document: Energy Efficiency Program for Consumer Products: Refrigerators, Refrigerator-Freezers, and Freezers* (November 2009).

<sup>3</sup> Docket Document No. EERE-2008-BT-STD-0012-0022, at ES-16 to ES-17.

years for upright freezers and 16 years for chest freezers.<sup>4</sup> Nevertheless, based on preliminary energy efficiency analyses for freezers in 2014, Electrolux estimates that the average payback period for ENERGY STAR rated freezers will be *better* than Navigant's estimates in most cases, offering an incentive to consumers to purchase models that exceed baseline requirements by 10%.

For example, Electrolux estimates that the average payback period for ENERGY STAR Class 9 freezers will range from 2.2 to 3.7 years, depending on the model (the category average is 2.775 years), as compared to Navigant's estimate of 3.5 years (median) and 4.3 years (average), to achieve a 40% efficiency level. The estimated payback period for most units is estimated to be only marginally longer than the 2.1 years needed to recoup the investment necessary to achieve the average 30% efficiency level based on Navigant's evaluation. Similarly, the Company's calculations suggest that for Class 18 units, consumers could recoup their investment in 4.1 years, compared to 7.9 years to achieve *baseline* performance of 30%, a clear advantage. Preliminary analyses indicate that the average payback period for ENERGY STAR-rated Class 10 freezers will be longer (around 7.4 years based on a sales-weighted average) than the time required to recoup the investment in other ENERGY STAR freezers because these units are already extremely efficient. However, this recoupment period is very reasonable compared to the estimated 16 year lifespan of the average chest freezer.

The Company believes that cost effective ENERGY STAR freezer models will exist in all freezer categories by 2014. Consumers should have the option to purchase ENERGY STAR freezers based on their own assessment of the life cycle cost and payback period. Manufacturers should have the option to offer, or not offer, ENERGY STAR products in these three categories, and to allow the marketplace to determine if consumers value such products. Aligning the effective date of the new ENERGY STAR requirements with the effective date for compliance with the new Department of Energy (DOE) baseline standards, as suggested by the Association of Home Appliance Manufacturers (AHAM), will provide an additional six months for all freezer manufacturers to continue to work on optimizing cost-effective energy efficiency technology with the goal of offering ENERGY STAR-compliant models in all freezer categories in 2014.

This data above establish that it is inappropriate to decide now to sunset ENERGY STAR options from the freezer category. Sunsetting full-size upright, chest and compact freezers from the ENERGY STAR program after 2014 will be counter to overall energy efficiency goals, deprive Electrolux of an important differentiating factor, and will greatly disadvantage consumers. A sunset and "wait and see" attitude is also unacceptable given the multi-year investments required to produce ENERGY STAR models. Electrolux strongly objects to the proposed sunset and urges EPA to recognize ENERGY STAR models in each freezer category.

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<sup>4</sup> BNCO01: *Domestic Chest Freezers, Upright Freezers, Fridges and Fridge-Freezers: Government Standards Evidence Base: Key Inputs*, available at <http://efficient-products.defra.gov.uk/spm/download/document/id/826>.

We appreciate the Agency's further consideration of this information. If you have additional questions, or if Electrolux can assist you further, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "George E. Hawranko". The signature is fluid and cursive, with a large initial "G" and a long, sweeping underline.

George E. Hawranko  
Director, Regulatory Affairs